

AUTHOR INDEX

Canadian Journal of Animal Science, Volume 73, 1993

Adams, G. P., 267
Adeola, O., 1
Aherne, F. X., 169, 1005
Ajuyah, A. O., 177
Allan, G. F., 981
Allan, J. W., 829
Allen, J. G., 355
Amyot, A., 57
Aziz, N. N., 829, 839

Bailey, D. R. C., 211, 805
Ball, R. O., 829, 839
Bate, L. A., 539
Batra, T. R., 997
Bawtree, A., 779
Bayourthe, C., 577
Beauchemin, K. A., 79, 211
Beaulieu, R., 343
Beaumont, C., 823
Bell, J. M., 679
Ben Salem, H., 553
Bittman, S., 545, 907
Block, E., 641
Boila, R. J., 217, 327, 421
Boyles, S. L., 287
Brenes, A., 611, 941
Buchanan-Smith, J. G., 565, 725
Burnside, E. B., 191
Burrows, V. D., 393
Burton, J. H., 191
Bush, R. S., 355

Cameron, B. J., 253
Campbell, C. P., 565
Campbell, L. D., 217, 421
Castell, A. G., 129, 471
Caugant, I., 891
Cave, N. A., 393
Chambers, J. R., 953
Chang, X., 49
Charlton, S. T., 253
Charmley, E., 67, 381, 453
Chavez, E. R., 411
Cheng, K.-J., 211
Cherel, Y., 823
Chohan, A. K., 401
Christen, A.-M., 57
Christensen, D. A., 303, 315
Christopherson, R. J., 33

Chu, S., 953
Clark, E. A., 725
Cliplef, R. L., 129, 201, 471, 483
Clunies, M., 523
Cohen, R. D. H., 303, 315, 431
Couture, Y., 241
Crober, D. C., 673, 953
Crossley, J. G., 539
Crow, G. H., 421
Crowle, W. L., 367
Cutler, B., 953

Degen, A. A., 207
Doreau, M., 553
Dubreuil, P., 241
Dufour, J. J., 495
Duynisveld, G. W., 89

Eigel, W. N., 931
Entz, T., 805
Etches, R. J., 25, 523, 953

Fair, C., 523
Fairfull, R. W., 953
Farmer, C., 241
Ferlay, A., 553
Finsten, A., 539
Firth, N. L., 673
Fisher, H., 459
Fisher, L. J., 545, 907
Forster, I. A., Jr., 869
Foxcroft, G. R., 253
Fredeen, A. H., 587, 699
Fredeen, H. T., 805
Freeze, B. S., 765
Frigg, M., 599
Frohlich, A. A., 149

Gallo, G. F., 641
Galloway, D. L., Sr., 869
Gilbert, R. P., 211
Gilbreath, R. L., 1001
Ginther, O. J., 267
Glimm, D. R., 253
Goetsch, A. L., 869
Goonewardene, L. A., 967
Gorewit, R. C., 449
Grandhi, R. R., 599
Guémen, D., 25
Guenter, W., 149, 611, 941
Guenther, C. L., 431

Page numbers in boldface refer to abstracts.

Haazele, F. M., 149
 Hacker, R. R., 509
 Hacker, R. R., 1
 Hamilton, R. M. G., 141, 401, 465, 631
 Hammell, K. L., 495
 Hardin, R. T. 159, 177
 He, P., 169
 Hidirogloiu, M., 997
 Holt, N. W., 109, 117
 Horton, G. M. J., 459
 Hullan, H. W., 141
 Hunt, D. E., 907
 Ibrahim, E. A., 421
 Ingalls, J. R., 327
 Iwaasa, A. D., 79
 Jackson, E. D., 141
 Janzen, E. G., 953
 Jefferson, P. G., 881
 Jessop, N. S., 981
 Johnson, L. J., 287
 Jones, S. D. M., 231, 303, 315, 915
 Jonhson, Z. B., 869
 Kelly, C. E., 855
 Kelly, J. M., 855
 Kemp, R. A., 223
 Kennedy, B. W., 223
 Kennelly, J. J., 253
 Kernan, J. A., 367
 Kibeloaud, A. R., 577
 King, B. D., 431
 Kirkwood, R. N. 259, 443
 Kirsch, J. D., 287
 Knipfel, J. E., 117
 Kondo, T., 661
 Korchniski, R. S., 515
 Kornegay, E. T., 931
 Kot, K., 267
 Kreft, B. J., 287
 Krzeminski, R., 553
 Kunelius, H. T., 699
 Kyuma, T., 661
 Laarveld, B., 303, 515
 Laflamme, L. F., 295
 Laforest, J. P., 495
 Lallès, J. P., 891
 Law, C., 183
 Lawson, P. D., 673
 Le Bihan, E., 823
 Leeson, S., 523
 Lindemann, M. D., 931
 Lurette, A., 673, 953
 Liu, M. F., 997
 Liu, Z., 953
 Løvendahl, P., 847
 Lupicki, M. E., 159
 MacInnis Mabon, B., 327
 Mackey, J. D., 183
 MacLeod, J. A., 401
 Maenz, D. D., 669
 Makarechian, M., 997
 Marquardt, R. R., 149, 611, 941
 Marshall, S. A., 565
 Marty, B. J., 411
 Mason, B. D., 907
 Mathis, C., 891
 Matte, J. J., 649
 McAllister, T. A., 211
 McBride, B. W., 855, 981
 McCartney, D. H., 749
 McCormac, S., 431
 McKay, R. M., 201, 437, 483, 805
 McKinnon, J. J., 303, 315
 McLean, A., 779
 McNiven, M. A., 401
 McQueen, R. E., 67, 587
 Mears, G. J., 277, 987
 Merrill, J. K., 169
 Millam, J., 953
 Milligan, L. P., 655, 855
 Mir, P. S., 101, 191, 545, 993
 Mir, Z., 101, 993, 545
 Mounoulou, R., 577
 Mowat, D. N., 49
 Munksgaard, L., 847
 Murray, A. C., 231
 Nakano, T., 1005
 Nasvadi, G. E., 183
 Newman, J. A., 805, 915
 Nicholson, J. W. G., 355, 381, 453
 Oehler, U. M., 953
 Ohshita, T., 661
 Oldham, J. D., 981
 Papadopoulos, Y. A., 699
 Paputungan, U., 997
 Patience, J., F., 669
 Patil, A., 869
 Patterson, R., 621
 Peacock, A. J., 259
 Petit, H. V., 57, 715
 Petitclerc, D., 241
 Pickard, M. D., 211
 Pogue, K. P., 183

Politis, I., 449
Price, M. A., 915
Proudfoot, F. G., 141, 631
Quinton, D., 779

Rae, W. A., 829, 839
Rahnefeld, G. W., 805, 971
Rajkumar, K., 443
Rath, A., 953
Retailleau, B., 823
Rioperez, J., 665
Risley, C. R., 931
Robinson, A. R., 673
Robinson, F. E., 159
Robinson, P. H., 67
Robitaille, 641
Rode, L. M., 765
Rotter, B. A., 611, 941

Saha, C. D., 1001
Salisbury, C. D. C., 141
Sather, A. P., 231
Savioe, P., 343
Schaalje, G. B., 277
Schaefer, A. L., 169, 231
Schaeffer, L. R., 223
Scollan, N. D., 981
Scott, S. L., 33
Seoane, J. R., 57, 343
Shelford, J. A., 545, 907
Sim, J. S., 177
Slanger, W. D., 287
Smith, C. A., 267
Smith, M. W., 599
Southorn, B. G., 855
Spurr, D. T., 367
Squires, E. J., 1
Stothers, S. C., 217, 421
Sumner, A. K., 367

Thacker, P. A., 259, 443, 599
Thériault, R., 343
Thompson, B. K., 465
Thompson, J. R., 169
Tong, A. K. W., 231
Tortuero, F., 665
Tosi, H. R., 373
Touleec, R., 891
Towner, R. A., 953
Townley-Smith, L., 993
Tremblay, D., 343
Tremblay, G. f., 343
Tukur, H. M., 891

Vaage, A. S., 655
Van Doormaal, B. J., 795
Van Kessel, A. G., 515
Vernay, M., 577
Vincent, B. C., 915

Ward, D., 971
Weise, S. F., 725
Weiss, G. M., 805, 971
Wikieem, B. M., 779
Wilkie, B. N., 191
Wilmis, W. D., 765, 881
Wittenberg, K. M., 89, 373
Wolynetz, M. S., 669
Wood, C. M., 931
Wyers, M., 823

Yang, W. Z., 49
Young, B. A., 207
Young, L. G., 1, 621
Yu, M. W., 159

Zaleski, H. M., 509
Zavizion, B., 449
Zee, J. A., 453
Ziegler, K., 967
ZoBell, D. R., 967

SUBJECT INDEX

Canadian Journal of Animal Science, Volume 73, 1993

β -adrenergic agonists
improving pork production efficiency, 1

Above-ground
production characteristics of mixed prairie, 881

Acid digest
calibration curves for fecal chromium, 109

Adrenocorticotrophic hormone
growth hormone in cows during stress, 847

Artificial Insemination
non-return rate evaluations for dairy and beef bulls, 795

Alfalfa
composition and degradability of fenugreek hay, 993
pasture in the Great Lakes Basin, 725
proteinolysis of alfalfa silage, 559
utilization of grass/legume-hay diets by sheep, 101

Animal models
within-herd evaluation, 223

Animal production
forage resource and beef production on British Columbia Crown lands, 779

Annual forage
wintering cows on fescue prairie, 765

Anthelmintic
deworming in heifers, 287

Antinutritional factors
nutritional value of canola meal, 679

Antibiotics
water sweetener and pig performance, 669

Antibody
selenium and bovine immunocompetence, 355

Antibody titres
xylose uptake and antibody in calves fed soy proteins, 191

Appetite
responses to selection for low backfat, 471

Articular cartilage lesion
articular cartilage in female breeding swine, 1005

Ascorbic acid
ochratoxin A and ascorbic acid in hen diets, 149

Aspen Parkland
grazing in the Aspen Parkland, 749

Atlantic Canada
pasture productivity in Atlantic Canada, 699

Autoclave
enzyme supplementation of peas, 605

Backfat
carcass quality characteristics of swine, 483
wintering cows on fescue prairie, 765

Barley
barley for laying hens, 625
effect of maturity on the nutritive value of barley straw, 367
minerals in Manitoba-grown grains, 421
selenium in Manitoba grains, 217

Barley cultivar
barley for laying hens, 625

Barley grain
energy sources in early lactation, 327

Basal GH
growth and GH kinetics in Holstein steers, 277

Beef cattle
forage resource and beef production on British Columbia Crown lands, 779
growth patterns of crossbred beef cows, 805
methods of evaluating cow productivity, 971
pastures in Quebec, 715
pasture in the Great Lakes Basin, 725

Beef heifers
fatness in yearling beef heifers and lifetime performance, 295
pelvic measurements in heifers, 997

Beef production
once-calved heifers for meat production, 915

Below-ground
production characteristics of mixed prairie, 881

Biochemistry
blood changes following an acute stress in pigs, 241

Biomass
production characteristics of mixed prairie, 881

Bird's-foot trefoil
pasture in the Great Lakes Basin, 725

Blood
selenium supplementation on plasma, S, Mg, and Se, 997

Blood gas
viability scoring and blood gas analysis, 649

Page numbers in **boldface** refer to abstracts.

Bloodless
bloodless castration procedure for feedlot bulls, 967

Bone ^{45}Ca
calcium dynamics during egg formation, 517

Bovine
growth inhibitor effects on myoepithelial cells, 449

Brassica spp.
pasture productivity in Atlantic Canada, 699

British Columbia
forage resource and beef production on British Columbia Crown lands, 779

Broiler
administration of penicillin to broiler chickens, 141
high protein soybeans for broilers, 401
naked oat in broiler diet, 393
sausage casings for chickens, 459

Broiler breeder
ad-libitum feed intake in broiler breeder hens, 159

Broody turkey hens
effects of naloxone on LH and PRL, 25

Bulls
non-return rate evaluations for dairy and beef bulls, 795

Calcium absorption
calcium dynamics during egg formation, 517

Calcium-45 activity
calcium dynamics during egg formation, 517

Calcium-45 half-life
calcium dynamics during egg formation, 517

Calf
chelated chromium for stressed feeder calves, 49
diurnal patterns of growth hormone and insulin in calves, 987
soybean globulin digestion by the calf, 891
wintering cows on fescue prairie, 765
xylose uptake and antibody in calves fed soy proteins, 191

Calf (dairy)
factors affecting sodium-potassium ATPase activity, 981

Canadian grain-fed veal
composition and characteristics of veal cutlets, 183

Canola meal
canola and pea meals in pig diets, 129
lignosulfonate-treated canola meal, 211
nutritional value of canola meal: a review, 679

omega-3 fatty acid composition of selected turkey parts, 177

Carbohydrate
nutritional value of canola meal: a review, 679

Carcass
canola and pea meals in pig diets, 129
responses to selection for low backfat, 471

Carcass characteristics
magnesium silicate in pig diets, 665

Carcass composition
carcass composition of cull sows, 829
commercial swine in Quebec
crude-protein requirements of large-frame cattle, 315
prediction of lean yield in cull sows, 839

Carcass fat
naked oat in broiler diet, 393

Carcass quality
carcass quality characteristics of swine, 483

Carcass traits
bloodless castration procedure for feedlot bulls, 967

Cartilage
ractopamine and cartilage soundness, 169

Casein
somatotropin and casein profile, 635
 κ -casein glycosylation
somatotropin and casein profile, 635

Castration
bloodless castration procedure for feedlot bulls, 967

Cattle
cold adaption and hormone kinetics, 33
deworming in heifers, 287
effect of the dominant follicle on its subordinates, 267
forage effects on mastication, 79
ionophores with low-quality grass diets, 869
lignosulfonate-treated canola meal, 211
non-return rate evaluations for dairy and beef bulls, 795
protein supplementation of forages, 57
rumen mat measurement, 655
selenium and bovine immunocompetence, 355
selenium supplementation on plasma, S, Mg, and Se, 997

Cattle hides
sausage casings for chickens, 459

Cauterization
effect of the dominant follicle on its subordinates, 267

Chick
enzyme supplementation of peas, 605

Chicken
enzyme supplementation of cereal grains,
941
oat bran, cotton seed hulls and guar gum for
chickens, 673

Chicken growth
high protein soybeans for broilers, 401

Cholesterol
oat bran, cotton seed hulls and guar gum for
chickens, 673

Chromium
a modified chromic oxide indicator ratio
technique, 1001
calibration curves for fecal chromium, 109
chelated chromium for stressed feeder calves,
49

Clearance
growth and GH kinetics in Holstein steers,
277

Cold
thyroxine in piglets, 533

Cold adaption
cold adaption and hormone kinetics, 33

Collagen
sausage casings for chickens, 459

Confinement
articular cartilage in female breeding swine,
1005

Corn
soluble lignins from silages and feces of
sheep fed on them, 661

Correlation
meteorological change, feed and hen shell
strength, 465

Cortisol
chelated chromium for stressed feeder calves,
49

Cotton seed hulls
oat bran, cotton seed hulls and guar gum for
chickens, 673

Cow
enzyme additives, 581
lipid supply and in vivo digestion in cows,
547
vitamin E and selenium for dairy cows, 453
wintering cows on fescue prairie, 765

Cow efficiency
methods of evaluating cow productivity, 971

Crested wheatgrass
utilization of grass/legume-hay diets by
sheep, 101

Crossbreeding
growth patterns of crossbred beef cows, 805

Crude enzyme
enzyme supplementation of peas, 605

Crude protein
crude-protein requirements of large-frame
cattle, 315
digestion of white lupin seeds, 571

Dairy cattle
energy sources in early lactation, 327
enzyme additives, 581
growth hormone in cows during stress, 847
injectable vitamin E and oxidized milk, 381
pastures in Quebec, 715
pasture in the Great Lakes Basin, 725
silage diets for dairy cows, 67

Deep-litter housing
deep-litter housing and growth performance,
643

Degradability
proteolysis of alfalfa silage, 559

Dehulling
enzyme supplementation of peas, 605

Deoxynivalenol
reducing the effects of mold-contaminated
corn in pigs, 615

Detergent fiber
digestion of white lupin seeds, 571

Dietary enzyme
enzyme supplementation of cereal grains,
941

Digestibility
a modified chromic oxide indicator ratio
technique, 1001
enzyme additives, 581
full-fat soybean digestibility in growing pigs,
411
utilization of grass/legume-hay diets by
sheep, 101

Digestion
ionophores with low-quality grass diets, 869
lipid supply and in vivo digestion in cows,
547
soybean globulin digestion by the calf, 891

Dioxane-soluble lignin
soluble lignins from silages and feces of
sheep fed on them, 661

Discriminant analysis
dystocia in heifers, 431

Diurnal patterns
diurnal patterns of growth hormone and
insulin in calves, 987

Drought
reed canarygrass pasture quality, 89

Duck (Muscovy)
genetic parameters of nephropathy in
Muscovy ducks, 823

Dystocia
dystocia in heifers, 431

Economics
nutritional value of canola meal, 679

Egg
oat bran, cotton seed hulls and guar gum for chickens, 673

Egg production
ad-libitum feed intake in broiler breeder hens, 159

Embryo
MRI and MRS of chicken embryos, 953

Energy
crude-protein requirements of large-frame cattle, 315
energy and protein effects on cattle growth, 303
nutritional value of canola meal, 679

Environment
growth patterns of crossbred beef cows, 805

Enzyme
enzyme additives, 581
enzyme supplementation of cereal grains, 941

Erythrocyte
factors affecting sodium-potassium ATPase activity, 981

Escherichia coli
intestinal effects of organic acid/*Escherichia coli*, 931

Estradiol
steroidogenesis in porcine granulosa cells, 443

Extrusion
full-fat soybean digestibility in growing pigs, 411

Fall grazing
wintering cows on fescue prairie, 765

Fecal markers
calibration curves for fecal chromium, 109

Feed efficiency
once-calved heifers for meat production, 915

Feed intake
ad-libitum feed intake in broiler breeder hens, 159
meteorological change, feed and hen shell strength, 465

Fenugreek
composition and degradability of fenugreek hay, 993

Fertility management
pasture productivity in Atlantic Canada, 699

Fetal survival
vitamin E for reproduction in gilts, 593

Flavour
injectable vitamin E and oxidized milk, 381

Flock parameters
meteorological change, feed and hen shell strength, 465

Follicular waves
effect of the dominant follicle on its subordinates, 267

Forage
fall grazing of Russian wildrye, 117
forage resource and beef production on British Columbia Crown lands, 779
grazing in the Aspen Parkland, 749
ionophores with low-quality grass diets, 869
pasture productivity in Atlantic Canada, 699
pastures in Quebec, 715
pastures in the Great lakes Basin, 725
protein supplementation of forages, 57
round bale silage for sheep, 343
wintering cows on fescue prairie, 765

Forage intake
fall grazing of Russian wildrye, 117

Forage production
forage resource and beef production on British Columbia Crown lands, 779

Forage quality
forage effects on mastication, 79

Forage species
silage diets for dairy cows, 67

Frame size
energy and protein effects on cattle growth, 303

Full-fat soybean products
full-fat soybean digestibility in growing pigs, 411

Gastrointestinal oxygen consumption
gastrointestinal oxygen consumption in sheep, 855

Gelatin
sausage casings for chickens, 459

Genetic evaluation
within-herd evaluation, 223

Genetic parameters
genetic parameters of nephropathy in Muscovy ducks, 823

Genetic resistance
genetic parameters of nephropathy in Muscovy ducks, 823

Genotype
factors affecting sodium-potassium ATPase activity, 981

Gilt
vitamin E for reproduction in gilts, 593

β -glucanase
barley for laying hens, 625

Glutathione peroxidase
selenium and bovine immunocompetence, 355

Glycinin
soybean globulin digestion by the calf, 891
xylose uptake and antibody in calves fed soy proteins, 191

Grading
prediction of lean yield in cull sows, 839

Grain
enzyme supplementation of cereal grains, 941

selenium in Manitoba grains, 217

Grain-fed veal
composition and characteristics of veal cutlets, 183

Gramine
Reed canarygrass hay and silage, 373
Reed canarygrass pasture quality, 89

Granulosa cells
steroidogenesis in porcine granulosa cells, 443

Grazing
pastures in Quebec, 715

Grazing management
pasture productivity in Atlantic Canada, 699

Growth
bloodless castration procedure for feedlot bulls, 967

carcass quality characteristics of swine, 483

crude-protein requirements of large-frame cattle, 315

growth patterns of crossbred beef cows, 805

naked oat in broiler diet, 393

natural passive immunization against SRIF in the lamb, 509

protein supplementation of forages, 57

utilization of grass/legume-hay diets by sheep, 101

Growth hormone
cold adaption and hormone kinetics, 33

diurnal patterns of growth hormone and insulin in calves, 987

growth and GH kinetics in Holstein steers, 277

growth hormone and reproduction in pigs, 259

growth hormone in cows during stress, 847

steroidogenesis in porcine granulosa cells, 443

Growth performance
commercial swine in Quebec
deep-litter housing and growth performance, 643

Growth promoter
administration of penicillin to broiler chickens, 141

Growth rate
canola and pea meals in pig diets, 129
magnesium silicate in pig diets, 665
ractopamine and cartilage soundness, 169
responses to selection for low backfat, 471

Guar gum
oat bran, cotton seed hulls and guar gum for chickens, 673

Hampshire
organ weights of swine, 201

Harvesting method
effect of maturity on the nutritive value of barley straw, 367

Hay
Reed canarygrass hay and silage, 373

Heat production
effect of simulated mud and rain, 207

Heifer
deworming in heifers, 287

dystocia in heifers, 431

Heifers once-calved
once-calved heifers for meat production, 915

Hematology
blood changes following an acute stress in pigs, 241

Hen
barley for laying hens, 625

enzyme supplementation of cereal grains, 941

ochratoxin A and ascorbic acid in hen diets, 149

Hordenine
Reed canarygrass hay and silage, 373

Reed canarygrass pasture quality, 89

Hormone kinetic
cold adaption and hormone kinetics, 33

Immaturity
effect of maturity on the nutritive value of barley straw, 367

Immunization
blood changes following an acute stress in pigs, 241

Immunocompetence
selenium and bovine immunocompetence, 355

Immunoneutralization
natural passive immunization against SRIF in the lamb, 509

In situ rumen degradation
composition and degradability of fenugreek hay, 993

In vitro solubility
composition and degradability of fenugreek hay, 993
digestion of white lupin seeds, 571

Incubation medium
factors affecting sodium-potassium ATPase activity, 981

Indicator
a modified chromic oxide indicator ratio technique, 1001

Inoculant
proteolysis of alfalfa silage, 559

Insulin
cold adaption and hormone kinetics, 33
diurnal patterns of growth hormone and insulin in calves, 987

Insulin-like growth factor I
energy and protein effects on cattle growth, 303
growth hormone and reproduction in pigs, 259
IGF-I gene expression in porcine ovarian tissue, 253
natural passive immunization against SRIF in the lamb, 509

Intact males
improving pork production efficiency, 1

Intake
ionophores with low-quality grass diets, 869

Ionophore
ionophores with low-quality grass diets, 869

Kernel moisture content
effect of maturity on the nutritive value of barley straw, 367

Lactating cows
comparison of grass silages for lactating cows, 907
nutrient evaluation of sunflower-corn silage, 539

Lactation
somatotropin and casein profile, 635

Lactobacillus
intestinal effects of organic acid/*Escherichia coli*, 931

Laying hens
enzyme supplementation of cereal grains, 941

Laying intensity
genetic parameters of nephropathy in Muscovy ducks, 823

Lean yield
carcass composition of cull sows, 829
prediction of lean yield in cull sows, 839

Lifetime performance
fatness in yearling beef heifers and lifetime performance, 295

Lignosulfonate
lignosulfonate-treated canola meal, 211

Lipid
energy sources in early lactation, 327

Lipid supply
lipid supply and in vivo digestion in cows, 547

Luteinizing hormone
effects of naloxone on LH and PRL, 25

Magnesium
electrolyte effects on pork quality, 231
selenium supplementation on plasma, S, Mg, and Se, 997

Magnesium silicate
magnesium silicate in pig diets, 665

Magnetic resonance imaging
MRI and MRS of chicken embryos, 953

Mammary-derived growth inhibitor
growth inhibitor effects on myoepithelial cells, 449

Manitoba
minerals in Manitoba-grown grains, 421
selenium in Manitoba grains, 217

Manure enzymes
deep-litter housing and growth performance, 643

Mastication
forage effects on mastication, 79

Mat index
rumen mat measurement, 655

Mat meter

Messenger RNA
IGF-I gene expression in porcine ovarian tissue, 253
rumen mat measurement, 655

Metabolic clearance rate
cold adaption and hormone kinetics, 33

Metabolism
vitamin E for reproduction in gilts, 593

Metabolizable energy
enzyme supplementation of peas, 605

Meteorological conditions
meteorological change, feed and hen shell strength, 465

Milk
vitamin E and selenium for dairy cows, 453

Milk composition
nutrient evaluation of sunflower-corn silage, 539

Milk fat
enzyme additives, 581

Milk production
silage diets for dairy cows, 67

Milk replacers
xylose uptake and antibody in calves fed soy proteins, 191

Milk yield
nutrient evaluation of sunflower-corn silage, 539

Mineral
a modified chromic oxide indicator ratio technique, 1001
minerals in Manitoba-grown grains, 421

Model
within-herd evaluation, 223

Mold-contaminated corn
reducing the effects of mold-contaminated corn in pigs, 615

Morbidity
chelated chromium for stressed feeder calves, 49

Mortality
preweaning piglet losses, 437

Mud
effect of simulated mud and rain, 207

Muscovy ducks
genetic parameters of nephropathy in Muscovy ducks, 823

Myoepithelial cells
growth inhibitor effects on myoepithelial cells, 449

Naloxone
effects of naloxone on LH and PRL, 25

Neonatal pig
viability scoring and blood gas analysis, 649

Nephropathy
genetic parameters of nephropathy in Muscovy ducks, 823

Non-return rate
non-return rate evaluations for dairy and beef bulls, 795

Nuclear magnetic resonance
MRI and MRS of chicken embryos, 953

Nursing status
growth patterns of crossbred beef cows, 805

Nutrient composition
composition and characteristics of veal cutlets, 183

Nutritive value
effect of maturity on the nutritive value of barley straw, 367

Nylon bag
composition and degradability of fenugreek hay, 993

Oat
minerals in Manitoba-grown grains, 421
selenium in Manitoba grains, 217

Oat bran
oat bran, cotton seed hulls and guar gum for chickens, 673

Oat (naked)
naked oat in broiler diet, 393

Ochratoxin A
ochratoxin A and ascorbic acid in hen diets, 149

Omega-3 fatty acids
omega-3 fatty acid composition of selected turkey parts, 177

Organic acids
intestinal effects of organic acid/*Escherichia coli*, 931

Organ
organ weights of swine, 201

Osteoarthritis
articular cartilage in female breeding swine, 1005

Osteochondrosis
ractopamine and cartilage soundness, 169

Ovarian morphology
ad-libitum feed intake in broiler breeder hens, 159

Ovary
effect of the dominant follicle on its subordinates, 267
IGF-1 gene expression in porcine ovarian tissue, 253

Ovulation rate
vitamin E for reproduction in gilts, 593

Oxfendazole
deworming in heifers, 287

Oxidized flavor
vitamin E and selenium for dairy cows, 453

Oxidized milk
injectable vitamin E and oxidized milk, 381

Pale, soft, exudative pork
electrolyte effects on pork quality, 231

Parity
energy sources in early lactation, 327

Pasture
grazing in the Aspen Parkland, 749
pastures in Quebec, 715

pasture productivity in Atlantic Canada, 699
Reed canarygrass pasture quality, 89
Pasture and grazing management
 pasture in the Great Lakes Basin, 725
Pea
 canola and pea meals in pig diets, 129
 enzyme supplementation of peas, 605
Pelvic diameter
 pelvic measurements in heifers, 997
pH
 intestinal effects of organic acid/*Escherichia coli*, 931
Pig
 blood changes following an acute stress in pigs, 241
 canola and pea meals in pig diets, 129
 commercial swine in Quebec
 full-fat soybean digestibility in growing pigs, 411
 IGF-I gene expression in porcine ovarian tissue, 253
 improving pork production efficiency, 1
 intestinal effects of organic acid/*Escherichia coli*, 931
 organ weights of swine, 201
 ractopamine and cartilage soundness, 169
 reducing the effects of mold-contaminated corn in pigs, 615
 responses to selection for low backfat, 471
 viability scoring and blood gas analysis, 649
Piglet
 thyroxine in piglets, 533
Pork
 electrolyte effects on pork quality, 231
 improving pork production efficiency, 1
Postruminal digestion
 digestion of white lupin seeds, 571
Potassium
 electrolyte effects on pork quality, 231
Poultry
 meteorological change, feed and hen shell strength, 465
 MRI and MRS of chicken embryos, 953
Prediction
 prediction of lean yield in cull sows, 839
Preslaughter
 electrolyte effects on pork quality, 231
Preweaning period
 preweaning piglet losses, 437
Procaine penicillin
 administration of penicillin to broiler chickens, 141
Processed soybean meal
 xylose uptake and antibody in calves fed soy proteins, 191
Production
 forage resource and beef production on British Columbia Crown lands, 779
Production efficiency
 improving pork production efficiency, 1
Productivity
 methods of evaluating cow productivity, 971
 pasture productivity in Atlantic Canada, 699
Prolactin
 effects of naloxone on LH and PRL, 25
Protein
 energy and protein effects on cattle growth, 303
 nutritional value of canola meal, 679
 soybean globulin digestion by the calf, 891
Protein supplementation
 protein supplementation of forages, 57
Protein synthesis
 gastrointestinal oxygen consumption in sheep, 855
Psathyrostachys juncea (See Russian wildrye)
Ractopamine
 ractopamine and cartilage soundness, 169
Rain
 effect of simulated mud and rain, 207
Rearing
 fatness in yearling beef heifers and lifetime performance, 295
Rectal temperature
 effect of simulated mud and rain, 207
Phalaris arundinacea L. (See Reed canarygrass)
Reed canarygrass
 Reed canarygrass pasture quality, 89
 Reed canarygrass hay and silage, 373
Repeatability
 pelvic measurements in heifers, 997
Reproduction
 growth hormone and reproduction in pigs, 259
Reproductive traits
 within-herd evaluation, 223
Research
 grazing in the Aspen Parkland, 749
Reseeding
 production characteristics of mixed prairie, 881
Residue levels
 administration of penicillin to broiler chickens, 141
Round-bale silage
 round bale silage for sheep, 343

Route of administration
 administration of penicillin to broiler chickens, 141

Rumen
 lipid supply and in vivo digestion in cows, 547

Rumen degradability
 digestion of white lupin seeds, 571
 composition and degradability of fenugreek hay, 993

Rumen mat
 rumen mat measurement, 655

Rumen undegradable protein
 lignosulfonate-treated canola meal, 211

Rumination
 forage effects on mastication, 79

Russian wildrye
 fall grazing of Russian wildrye, 117

Rye
 minerals in Manitoba-grown grains, 421

Sausage casings
 sausage casings for chickens, 459

Secretion
 growth and GH kinetics in Holstein steers, 277

Selection
 carcass quality characteristics of swine, 483
 effect of the dominant follicle on its subordinates, 267
 organ weights of swine, 201

Selection index
 preweaning piglet losses, 437
 responses to selection for low backfat, 471

Selenium
 selenium and bovine immunocompetence, 355
 selenium supplementation on plasma, S, Mg, and Se, 997
 selenium in Manitoba grains, 217
 vitamin E and selenium for dairy cows, 453

Sensory evaluation
 composition and characteristics of veal cutlets, 183

Sex
 factors affecting sodium-potassium ATPase activity, 981

Sheep
 gastrointestinal oxygen consumption in sheep, 855
 natural passive immunization against SRIF in the lamb, 509
 pasture in the Great Lakes Basin, 725
 pastures in Quebec, 715

utilization of grass/legume-hay diets by sheep, 101

Sheep digestion
 soluble lignins from silages and feces of sheep fed on them, 661

Shell ^{45}Ca
 calcium dynamics during egg formation, 517

Shell secretion
 calcium dynamics during egg formation, 517

Silage
 enzyme additives, 581
 proteolysis of alfalfa silage, 559
 Reed canarygrass hay and silage, 373
 soluble lignins from silages and feces of sheep fed on them, 661

Silage diets
 silage diets for dairy cows, 67

Silage preference
 comparison of grass silages for lactating cows, 907

Sodium-potassium ATPase
 factors affecting sodium-potassium ATPase activity, 981
 gastrointestinal oxygen consumption in sheep, 855

Soil fertility
 production characteristics of mixed prairie, 881

Solubility (in vitro)
 composition and degradability of fenugreek hay, 993
 digestion of white lupin seeds, 571

Somatostatin
 blood changes following an acute stress in pigs, 241
 improving pork production efficiency, 1
 natural passive immunization against SRIF in the lamb, 509

Somatotropin
 somatotropin and casein profile, 635

Sorghum
 soluble lignins from silages and feces of sheep fed on them, 661

Sows
 a modified chromic oxide indicator ratio technique, 1001
 articular cartilage in female breeding swine, 1005
 carcass composition of cull sows, 829
 prediction of lean yield in cull sows, 839

Soybean
 full-fat soybean digestibility in growing pigs, 411
 high protein soybeans for broilers, 401

soybean globulin digestion by the calf, 891
Specific gravity
meteorological change, feed and hen shell strength, 465
Steer growth
growth and GH kinetics in Holstein steers, 277
Steers
chelated chromium for stressed feeder calves, 49
crude-protein requirements of large-frame cattle, 315
effect of simulated mud and rain, 207
energy and protein effects on cattle growth, 303
proteolysis of alfalfa silage, 559
Stocking rate
fall grazing of Russian wildrye, 117
Stress
blood changes following an acute stress in pigs, 241
chelated chromium for stressed feeder calves, 49
growth hormone in cows during stress, 847
Sulphur
selenium supplementation on plasma, S, Mg, and Se, 997
Sunflower seed
energy sources in early lactation, 327
Sunflower-corn silage
nutrient evaluation of sunflower-corn silage, 539
Surgery
bloodless castration procedure for feedlot bulls, 967
Survival
preweaning piglet losses, 437
Sweetener
water sweetener and pig performance, 669
Swine
carcass quality characteristics of swine, 483
deep-litter housing and growth performance, 643
growth hormone and reproduction in pigs, 259
preweaning piglet losses, 437
water sweetener and pig performance, 669
within-herd evaluation, 223

Tall fescue
comparison of grass silages for lactating cows, 907
Tallow
energy sources in early lactation, 327
Technician
non-return rate evaluations for dairy and beef bulls, 795
Temperature
ochratoxin A and ascorbic acid in hen diets, 149
thyroxine in piglets, 533
Thermoregulation
thyroxine in piglets, 533
Thyroid
natural passive immunization against SRIF in the lamb, 509
Thyroxine
thyroxine in piglets, 533
Timothy
round bale silage for sheep, 343
Tocopherol
injectable vitamin E and oxidized milk, 381
vitamin E and selenium for dairy cows, 453
Toxicity
ochratoxin A and ascorbic acid in hen diets, 149
Trypsin inhibitor
high protein soybeans for broilers, 401
Turkey
omega-3 fatty acid composition of selected turkey parts, 177

Uronic acid
ractopamine and cartilage soundness, 169

Veal
composition and characteristics of veal cutlets, 183
Viability
viability scoring and blood gas analysis, 649
Vitamin E
vitamin E and selenium for dairy cows, 453
vitamin E for reproduction in gilts, 593
Volatile fatty acids
intestinal effects of organic acid/*Escherichia coli*, 931
Voltage divider
rumen mat measurement, 655

Water
water sweetener and pig performance, 669
Water-use efficiency
production characteristics of mixed prairie, 881
Weaning
soybean globulin digestion by the calf, 891
Wheat
minerals in Manitoba-grown grains, 421

selenium in Manitoba grains, 217
White lupin seeds
 digestion of white lupin seeds, 571

Xylose absorption
 xylose uptake and antibody in calves fed soy
 proteins, 191

Yield
 effect of maturity on the nutritive value of
 barley straw, 367

Yolk deposition
 ad libitum feed intake in broiler breeder
 hens, 159

Yorkshire
 organ weights of swine, 201

